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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,118	02/25/2002	Didier Lefevre	20198/0059	8544

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EXAMINER

GABEL, GAILENE

ART UNIT	PAPER NUMBER
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1641

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/081,118	LEFEVRE ET AL.	
	Examiner	Art Unit	
	Gailene R. Gabel	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/25/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group 1, claims 1-11, in the reply filed on 10/29/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 12-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being claims drawn to a non-elected invention. Currently, claims 1-18 are pending and claims 1-11 are under examination.

Abstract

2. Applicant is reminded of the proper language and format of an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title.

Specification

3. Applicant is reminded of the proper contents of the specification.

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A title: Brief Description of the Several Views of the Drawings: See MPEP § 608.01(f) and a reference to and brief description of the drawings as set forth in 37 CFR 1.74, is missing in the disclosure.

Information Disclosure Statement

4. The Information Disclosure Statement (PTO-1449) filed February 25, 2002 is acknowledged. References AL and AM were not considered because neither an English translation nor a statement of relevancy was provided therefor.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 1 has improper antecedent basis problem in reciting, "Reagent for the identification". Language such as "A reagent for identifying" is suggested but not required to obviate this rejection.

Claim 1 is vague and indefinite in reciting, "in particular" because it is unclear whether the limitation following the phrase is part of the claimed invention. See MPEP § 2173.05(d).

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation "biological cells in a sample", and the claim also recites "in particular in a blood sample" which is the narrower statement of the range/limitation.

Claim 1 is non-idiomatic, appears redundant, and therefore renders the claim indefinite in reciting, "characterized in that it comprises". Perhaps Applicant intends, "Reagent for identifying ..., comprising".

Claim 1, (part 1) is indefinite and recites improper Markush language in reciting, "selected from at least one detergent" because it fails to define a selected Markush group of cell lysing agents to select from. A proper Markush group would recite, "a cell lysing agent selected from the group consisting of agent A, agent B, and agent C" for example.

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In claim 1, (part 1), "lye" should be "lyse".

Regarding claim 1, (part 1) the phrase "specifically a given type of cell" renders the claim indefinite because the claim includes elements not actually disclosed (those encompassed by "specifically a given type of cell"), thereby rendering the scope of the claims unascertainable.

Claim 1, (part 2) is non-idiomatic and, therefore, confusing in reciting, "designed".

Claim 1, (part 2) lacks antecedent support in reciting, "the intracellular nucleic acids" and "the unlysed remaining cell".

Claims 2-11 have improper antecedent basis problems in reciting, "Reagent according to claim". Language such as "The reagent according to claim" is suggested but not required to obviate this rejection.

Claim 2 is non-idiomatic, incomprehensible, and therefore confusing in reciting, "characterized in that the cell lysing agent comprising ... in a concentration capable of lysing erythrocytes". Language such as, "The reagent according to claim 1, wherein the cell lysing agent comprises at least one ionic or non-ionic detergent in a concentration capable of lysing erythrocytes" is suggested but not required to obviate this rejection.

Claim 2 is indefinite in failing to further limit the subject matter of a previous claim. Specifically, claim 1 from which it depends appears to recite that the "cell lysing agent is selected from at least one detergent"; however, in the instant claim 2, the "cell lysing agent" is recited as "comprising ..." which denotes open language being incorporated into the claim.

Regarding claim 1, the phrase "and/or" renders the claim indefinite because it is unclear whether the limitation following the phrase are part of the claimed invention.

Claim 3 is non-idiomatic, and therefore confusing in reciting, "characterized in that ...". Language such as, "The reagent according to claim 1, wherein" is suggested but not required to obviate this rejection. Same analogous comment and problem applies to claims 4-11.

Claim 3 is indefinite in reciting improper Markush language in reciting, "the detergent is selected from:". A proper Markush language would recite, "the detergent is selected from the group consisting of...XXX, XXX, and XXX".

Claim 5 is indefinite in failing to recite a positive limitation in reciting, "capable of combining". Further, it is unclear what Applicant intends to encompass in reciting the terms, "combining" and "combined".

Claim 5 lacks antecedent support in reciting, "the intracellular ribonucleic acid".

Claim 5 is ambiguous in reciting, "and enhancing its fluorescence once it has combined with the latter. Please clarify. Perhaps Applicant intends, "The reagent according to claim 1, wherein the stain marks and enhances the fluorescence of intracellular ribonucleic acid".

Claim 6 is indefinite in reciting improper Markush language in reciting, "stain is selected from:". A proper Markush language would recite, "the stain is selected from the group consisting of...XXX, XXX, and XXX".

Claim 7 is vague and indefinite and fails to recite a positive limitation in reciting, "capable of promoting penetration". Specifically, it is also unclear what Applicant

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intends to encompass in reciting the term, "promoting". Does Applicant intend, "increasing permeability of cell membrane" or "increasing capacity of the stain to penetrate a cell membrane". Please clarify. See also claim 8.

Claim 7 lacks clear antecedent support in reciting, "the cells to be marked".

Regarding claim 8, the phrase "and/or" renders the claim indefinite because it is unclear whether the limitation following the phrase are part of the claimed invention.

Regarding claim 10, the phrase "and/or" renders the claim indefinite because it is unclear whether the limitation following the phrase are part of the claimed invention.

Claim 10 is indefinite in reciting improper Markush language in reciting, "aldehyde selected from:". A proper Markush language would recite, "aldehyde is selected from the group consisting of...XXX, XXX, and XXX".

Claim 11 is indefinite in reciting improper Markush language in reciting, "at least one compound selected from:". A proper Markush language would recite, "at least one compound selected from the group consisting of...XXX, XXX, and XXX".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakata (US 5,496,734).

Sakata discloses a reagent for identifying, counting, and classifying blood cells. The reagent comprises a lysing agent or cationic detergent (surfactant) such as quaternary ammonium salts at a concentration that lyses erythrocytes and a fluorescent stain (labeling substance) that can permeate through damaged cell membrane for incorporation with and labeling of intracellular nucleic acids of unlysed cells (leucocytes) (see column 6, line 64 to column 7, lines 1-67 and column 8, lines 1-12). According to Sakata, nonionic surfactant may also be added to the reagent to control the effects of the ionic surfactant toward cell membrane (see column 9, line 14 to column 10, line 4). Sakata provides that the surfactant may function by removing part of substances which constitute cell membrane, i.e. ionophore; thus yielding pores in the cell membrane to allow passage of substances such as stain into the cell (see column 10, line 63 to column 11, line 8). Stains used with the reagent include Thiazole Orange, Acridine Orange, ethidium bromide, and propidium bromide (see column 8, lines 18-29). Sakata teaches that alcohol can be added as fixing agent to minimize loss of cytoplasm and granules and to optimize degree of damage of the cell membranes. According to Sakata, formaldehyde and glutaraldehyde are also used as fixing agents (see column 10, lines 10-39 and column 2, lines 13-19). The reagent further includes anticoagulant and buffer (see column 8, line 64 to column 9, line 13).

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7. Claims 1-7 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakata (US 5,496,734).

Deka et al. disclose a reagent for identifying, counting, and classifying blood cells using flow cytometry. The reagent comprises a lysing agent or non-ionic detergent and a fluorescent dye. The non-ionic detergent may be polyoxyethylene ethers and sorbitans (Tween X) (see column 4, lines 46-59). Stains used with the reagent include Acridine Orange and TO-PRO-3 (see column 6, lines 9-22). According to Deka et al., cell fixation is used to transport or penetrate fluorescent stain into cells through cell membrane to stain RNA (see column 5, line 14 to column 10, line 4). Deka et al. teach using formaldehyde as fixing agent; hence, a cell penetration agent (see column 5, lines 53-66). The reagent further includes buffer and fixatives (see column 5, lines 12-19).

8. No claims are allowed.

Remarks

9. Prior art made of record are not relied upon but considered pertinent to the applicants' disclosure:

Kim et al. (US Patent 5,648,225) disclose a multipurpose reagent having a lysing agent (saponin) and a nuclear stain (ethidium bromide).

Lefevre et al. (US Patent 5,232,857) disclose a reagent having a lysing reagent (saponin) and a stain (chlorazol black).

Murphy et al. (US Patent 6,562,563) disclose compositions for determining interactions of mitochondrial components. Murphy et al. teaches assessing the ability of agents to modulate apoptosis using ionophores such as valinomycin (see columns 36 and 37).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gailene R. Gabel whose telephone number is (571) 272-0820. The examiner can normally be reached on Monday, Tuesday, and Thursday, 7:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gailene R. Gabel
Patent Examiner
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December 17, 2004 *CH*

Christopher L. Chin
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GROUP ~~1800~~ 1641
12/20/04